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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,226

05/31/2006

Franz Thoemmes

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EXAMINER

BOECKMANN, JASON J

ART UNIT

PAPER NUMBER

3752

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DELIVERY MODE

11/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,226	<b>Applicant(s)</b> THOEMMES, FRANZ	
	<b>Examiner</b> Jason J. Boeckmann	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8,10 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8,10 and 14-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

Upon further reconsideration of the drawing objection, it has been decided that the replacement sheet filed on 1/3/2007 is hereby entered and the drawing objection is moot.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Aoki et al. (US 2002/0170987).

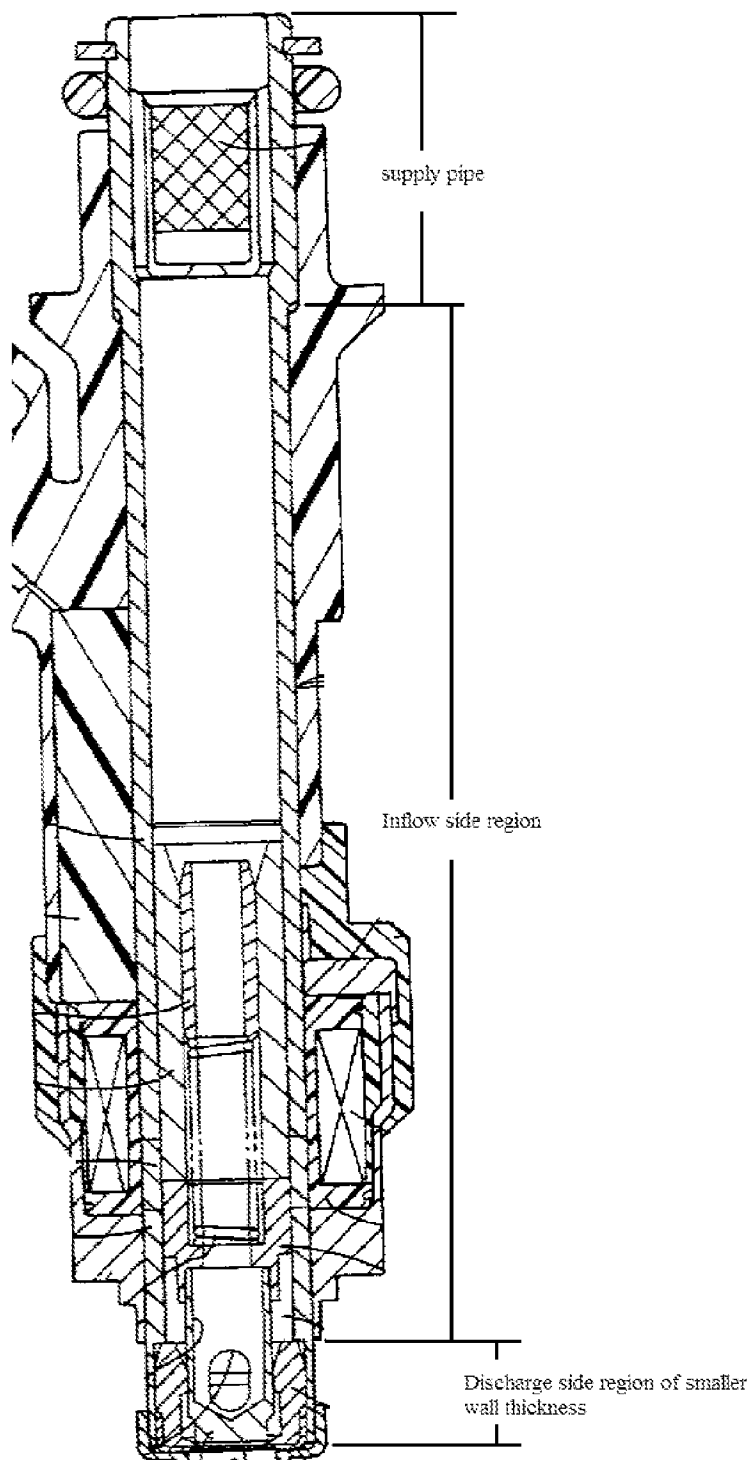
Aoki et al. shows a fuel injector (1) comprising; a valve needle (26) an armature (25) forming an axially movable valve port together with the valve needle, a restoring spring (24) acting upon the armature, a magnetic coil (31) cooperating with the armature, a valve-seat body (26), a valve closure member (28a) which forms a sealing seat with the valve seat body and; a valve sleeve (14) surrounding the armature and the valve needle, a wall thickness of the valve sleeve varying across its axial direction (fig

2), wherein the wall the wall thickness of the valve sleeve decreases in a discharge direction of a fuel (figure 2), wherein a radial cross section of the valve sleeve decreases between an inflow-side region and a discharge-side region on a color (figure 2), wherein the radial cross section and the wall thickness of the inflow-side region are constant from the collar to an inflow-side end of the valve sleeve (figure 2); wherein the decreased radial cross section and decreased wall thickness of the discharge-side region are constant from the collar to a discharge-side end of the valve sleeve (see examiners marked up figure below), and wherein the inflow side region of the valve sleeve is formed in one piece with a supply pipe (see examiners marked up figure below).

It is noted that the term "in order to limit noises emissions," of line 13, is being considered a functional limitation and is given little or no patentable weight in an apparatus claim.

Additionally, as to the recited process of forming the valve sleeve in one piece with a supply pipe, such is a product by process recitation. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious variant from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113).

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Regarding claim 15, the fuel injector includes an intake pipe (8) that extends beyond the valve sleeve.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. (US 2002/0170987).

Aoki et al. shows all aspects of the applicant's invention as in the rejection of claim 8 above, but fails to specifically disclose that the thickness of the valve sleeve is about .3 to .6 mm in an inflow-side region and that the thickness of the valve sleeve is about .2 to .5 mm in a discharge-side region.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to make the thickness of the valve sleeve about .3 to .6 mm in an inflow-side region and the thickness of the valve sleeve about .2 to .5 mm in a discharge-side region, since our reviewing courts have held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably

distinct from the prior art device. *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984).

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. (US 2002/0170987), in view of Dallmyer et al. (EP 1 219 825 A1).

Aoki et al. shows all aspects of the applicant's invention as in the rejection of claim 8 above except for an intake pipe that extends beyond the valve sleeve, and a filter element that is pressed into the valve sleeve.

However, Dallmyer et al. shows a fuel injector having a filter assembly (282) that includes intake pipe (283) that extends beyond the valve sleeve, and a filter element (284).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to add the filter assembly (282) including the intake pipe and the filter element to the fuel injector of Aoki et al. and have it pressed into the valve sleeve. This modification would allow for the fuel entering the injector to be filtered, as taught by Dallmyer et al.

### ***Response to Arguments***

Applicant's arguments with respect to claims 8, 10 and 14-16 have been considered but are moot in view of the modified rejection above.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Boeckmann whose telephone number is (571)272-2708. The examiner can normally be reached on 8:00- 5:00, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184/1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. J. B./  
Examiner, Art Unit 3752  
11/3/2008  
/Len Tran/  
Supervisory Patent Examiner, Art Unit 3752